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From: Commander, Naval Facilities Engineering Command (NAVFAC Criteria Office)
To: Distribution

Subj: YEAR 2000 (Y2K) COMPLIANCE FOR NAVFAC CONSTRUCTION PROJECTS,
INTERIM TECHNICAL GUIDANCE

Encl: (1) Y2K Guide Specification Insert
(2) Navy Master Spec Sections Potentially Requiring Y2K Insert
(3) Y2K Insert for Section 01110, Summary of Work

1. Purpose. To provide best available current guidance for incorporating Year 2000 compliance requirements into current and future NAVFAC construction projects.
2. Background. Computer controlled facility components are prone to fail on 1 January or Leap Year 2000 unless the components are Year 2000 compliant. These components have software driven technology and embedded microchip technology, and include programmable thermostats, HVAC controllers, elevator controllers, fire detection and suppression systems, security systems, and any other facilities control system utilizing microcomputer, minicomputer, or programmable logic controller. Construction contracts do not inherently include Y2K compliance provisions because the FAR Part 39.106 requiring compliance only applies to the acquisition of information technology, not buildings or building equipment control and operating systems.
3. Technical Guidance. Until such time as the need for specifying Y2K compliance is no longer necessary, follow the guidance specified herein, tempered by circumstances relative to each specific project.

a. Key Information: Y2K specifications requirements must appear in the guide specification section specifying the affected components. A poll of construction and engineering and design criteria and specification personnel across NAVFAC determined that it was not sufficient to only insert a broad scope paragraph in Division 1 and expect Y2K compliance to be effectively covered. Therefore, three things are needed for each technical specification requiring revision to include Y2K compliance:

- (1) Part 2 includes the specification wording appropriate for the component.
- (2) Part 1 includes the consensus definition of Y2K compliance.
- (3) Part 1, Submittals includes a requirement to submit a statement accompanying the component submittal indicating Y2K compliance.

b. Existing Projects: Each phase of a project requires a different approach to Y2K compliance. This Interim Technical Guidance applies to the following project stages:

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- (1) Projects with specifications not yet essentially complete: revise all applicable specification sections using the updated Guide Specification paragraphs in enclosure (1) and the list of potentially affected Guide Specifications in enclosure (2).
- (2) Projects with essentially completed specifications: revise Section 01110 per enclosure (3).
- (3) Out for bid: issues amendment to Section 01110 and identify applicable Sections according to enclosure (3).
- (4) Awarded projects where equipment has not yet been ordered: issue contract modification using wording from enclosure (3).
- (5) Projects under construction for which equipment has been ordered: ROICC/Contractor/A&E of Record determine what equipment is not Y2K compliant and issue contract modification using wording from enclosure (3) in consultation with contractor as appropriate.
- (6) Projects under construction for which equipment has been installed: ROICC/Contractor/A&E of Record determine what equipment is not Y2K compliant and consult with activity/customer before modifying contract.

c. Design-Build Projects: Y2K compliance requirements must be incorporated into each request for proposal for design-build projects and submittal requirements must include manufacturers' statement of compliance.

4. Action. NAVFAC project managers, design architects and engineers, construction managers and ROICCs ensure that technical guidance in paragraph 3 is employed for all projects. NAVFAC Criteria Office include this Interim Technical Guidance on its Internet Homepage. NAVFAC Guide Specifications Office revise the guide specifications in enclosure (2) for incorporation into the next Construction Criteria Base (CCB) and immediately post them on the Guide Specifications web page. Preparers of regional and local specifications revise them to incorporate this technical guidance.

5. Dissemination. Provide wide dissemination of this Interim Technical Guidance to ROICCs, OICCs, and activities under your cognizance.

6. Cancellation. This interim technical guidance is canceled when the requirement is no longer valid (some time after 1 January 2000 yet to be determined).

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7. Points of Contact. For additional information concerning Y2K compliance for construction projects, the following points of contact are provided.

NAVFAC Criteria Office - Mr. Richard Paradis, P.E., DSN 262-4447/757-322-4447
NAVFAC Criteria Office - Mr. Charles Mandeville, P.E., DSN 262-4208/757-322-4208
NAVFAC Criteria Web Site: http://www.efdlant.navfac.navy.mil/Lantops_15/home.htm
NAVFAC Guide Specification Division - Mr. Carl Kersten, DSN 551-5661/805-982-5661
NAVFAC Guide Specifications Web Site: <http://www.nfgs.navy.mil>

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PACNAVFACENGCOM Codes 04, 406 (W. Takushi)
ENGFLDACT CHESAPEAKE Codes 04, 406 (H. Trechsel)
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ENGFLDACT MIDWEST Codes 04, 420 (J. Kang)
ENGFLDACT NORTHWEST Codes 15, 04B (K. Jones and M. Randel)
ENGFLDACT WEST Codes T2, T1E (K. Lee)
NFESC ESC 60 (Gary Biggers)
NFESC (D. Holmes, G. Urata, G. Dann)
PWC GUAM Codes 400, 423 (H. Moguel)
PWC GREAT LAKES Codes 400, 422 (P. Patel)
PWC JACKSONVILLE Codes 400, 420 (D. Simes)
PWC NORFOLK Codes 400, 424 (R. Jones)
PWC PEARL HARBOR Codes 400, 420 (L. Kaya)
PWC PENSACOLA Code 400 (W. Reinschmidt)
PWC SAN DIEGO Code 400 (J. Strauss)
PWC NORFOLK DET PHILADELPHIA Code 400
PWC WASHINGTON Codes 400, 410 (J. Verde)
PWC YOKOSUKA Code 400 (C. DeConti)
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COMNAVSEASYS
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CHNAVPER
BUMED
COMNAVSECGRU
COMNAVMETOCCOM
CNR
COMNAVCOMTELCOM

Y2K GUIDE SPECIFICATION INSERT

The following wording must be inserted into each guide specification identified as having “computer controlled facility components.”

PART 1 GENERAL

1.3 DEFINITIONS

- a. Year 2000 compliant – means computer controlled facility components that accurately process date and time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations.

1.4 SUBMITTALS

1.4.1 SD-08 Statements

- a. Year 2000 (Y2K) Compliance Warranty G

1.4.1.1 Year 2000 (Y2K) Compliance Warranty. For each product, component and system specified in this section as a “computer controlled facility component” provide a statement of Y2K compliance warranty for the specific equipment. The contractor warrants that each hardware, software, and firmware product delivered under this contract and listed below shall be able to accurately process date and time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations to the extent that other computer controlled components, used in combination with the computer controlled component being acquired, properly exchange date and time data with it. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of the contractor's standard commercial warranty or warranties contained in this contract, provided that, notwithstanding any provision to the contrary, in such commercial warranty or warranties, the remedies available to the Government under this warranty shall include repair or replacement of any listed product whose non-compliance is discovered and made known to the contractor in writing within one year (365 days) after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract, with respect to defects other than Year 2000 performance.

PART 2 PRODUCTS

NOTE: To ensure that buildings’ systems continue to function beyond Year 2000, the following paragraph must be included when this section is part of a

construction contract. For more information on Y2K, see these web sites on the Internet. <http://www.doncio.navy.mil/y2k/year2000.htm>, the Year 2000 homepage of the Department of the Navy Chief Information Officer (DONCIO); <http://www.itpolicy.gsa.gov/mks/yr2000/legal.htm>, the General Services Administration (GSA) Chief Information Officer (CIO) homepage for Y2K procurement, contracting, and legal issues; <http://y2k.lmi.org/gsa/y2kproducts> contains information on vendor product compliance.

2.1 Provide computer controlled facility components, specified in this section, that are Year 2000 compliant (Y2K). Computer controlled facility components refers to software driven technology and embedded microchip technology. This includes, but is not limited to, telecommunications switches, programmable thermostats, HVAC controllers, elevator controllers, utility monitoring and control systems, fire detection and suppression systems, alarms, security systems, traffic signals, and other facilities control systems utilizing microcomputer, minicomputer, or programmable logic controllers.

NOTE: The paragraph above must be modified to specify only the actual components and products specified in a particular technical specification section or must be modified to add a warning notice to the appropriate tech note in spec sections. This note will be needed where components that could be affected by Y2K are not explicitly identified in the spec, but are either referenced in the spec tech notes or are likely to be added to the spec by designers. Spec section examples are: water tanks, fencing, SF6 switches, 400-Hz converters, security lighting, weight handling equipment, fire pumps, foam fire suppression sprinklers and extinguishing systems.

**NAVY MASTER SPEC SECTIONS
POTENTIALLY REQUIRING Y2K INSERT
7/29/98**

DIVISION 02 SITE WORK

02811	09/97	IRRIGATION SPRINKLER SYSTEMS
02821	03/98	CHAIN LINK FENCES AND GATES

DIVISION 08 DOORS & WINDOWS

08710	09/97	DOOR HARDWARE
08745	06/96	ELECTRICAL LOCKING CONTROL FOR BRIGS

DIVISION 11 EQUIPMENT

11020	03/96	SECURITY VAULT DOOR [AND BY DAY GATE]
11194	12/96	DETENTION HARDWARE
11320	03/97	GRIT COLLECTING EQUIPMENT
11331	12/95	COMMINUTOR
11338	03/97	CIRCULAR CLARIFIER
11375	12/96	AERATION EQUIPMENT
11400	12/96	FOOD SERVICE EQUIPMENT
11475	12/95	RADIOGRAPHIC DARKROOM EQUIPMENT
11601	12/96	LABORATORY EQUIPMENT AND FUMEHOODS
11702	12/96	MEDICAL EQUIPMENT, MISCELLANEOUS
11744	12/96	DENTAL EQUIPMENT

DIVISION 13 SPECIAL CONSTRUCTION

13038	06/96	COLD-STORAGE ROOMS (PREFABRICATED PANEL TYPE)
13205	03/98	STEEL TANKS WITH FIXED ROOFS
13209	03/98	WATER STORAGE TANKS
13216	06/97	UNDERGROUND PETROLEUM TANKS
13702	03/98	BASIC INTRUSION DETECTION SYSTEMS (IDS)
13703	06/98	COMMERCIAL INTRUSION DETECTION SYSTEMS (IDS)
13798	06/96	DURESS SIGNAL SYSTEM [FOR BRIG FACILITIES]
13799	06/96	WATCHTOUR SYSTEM [FOR BRIG FACILITIES]
13851	03/98	EXTERIOR FIRE ALARM SYSTEM, CLOSED CIRCUIT TELEGRAPHIC TYPE
13852	06/97	INTERIOR FIRE DETECTION AND ALARM SYSTEM
13853	09/96	FIRE ALARM SYSTEM, RADIO TYPE
13920	03/98	FIRE PUMPS

DIVISION 14 CONVEYING SYSTEMS

14210	06/96	ELECTRIC TRACTION ELEVATORS
14240	09/97	HYDRAULIC ELEVATORS

DIVISION 15 MECHANICAL

15183	03/98	STEAM SYSTEM AND TEMRINAL UNITS
15193	03/98	GASOLINE/DIESEL DISPENSING SYSTEMS
15194	03/98	AVIATION FUEL DISTRIBUTION AND DISPENSING
15195	03/97	NATURAL GAS AND LIQUID PETROLEUM PIPING
15213	03/98	LARGE CCENTRIFUGAL AIR COMPRESSORS (OVER 200 HP)
15214	03/98	LARGE NONLUBRICATED RECIPROCATING AIR COMPRESSORS (OVER 300 HP)
15215	03/98	NONLUBRICATED ROTARY SCREW AIR COMPRESSORS(100 HP AND LARGER)
15501	06/97	STEAM HEATING PLANT WATERTUBE (SHOP ASSEMBLED) COAL/OIL OR COAL
15502	09/97	STEAM HEATING PLANT WATERTUBE (FIELD ERECTED) COAL/OIL OR COAL
15511	06/97	WATER-TUBE BOILERS, OIL/GAS OR OIL
15516	03/98	STEAM BOILERS AND EQUIPMENT (500,000 –18,000,000 BTU/HR)
15517	03/98	STEAM BOILERS AND EQUIPMENT (18,000,000 – 60,000,000 BTU/HR)
15601	03/98	CENTRAL REFRIGERATION EQUIPMENT FOR AIR CONDITIONING
15602	03/98	REFRIGERATION EQUIPMENT FOR COLD STORAGE
15730	03/98	UNITARY AIR CONDITIONING EQUIPMENT
15901	03/98	SPACE TEMPERATURE CONTROL SYSTEMS
15910	09/97	DIRECT DIGITAL CONTROL SYSTEMS

DIVISION 16 ELECTRICAL

16230	03/97	DIESEL-ELECTRIC GENERATORS (DESIGN 1) 500 TO 2,500 KW – PRIME DUTY
16231	03/97	DIESEL-ELECTRIC GENERATORS (DESIGN 2) 2,501 KW OR LARGER – PRIME DUTY
16232	03/97	STANDBY DIESEL-ELECTRIC GENERATORS (DESIGN 3) 301 TO 1,000 KW
16233	03/97	STANDBY DIESEL-ELECTRIC GENERATORS (DESIGN 4) 1,001 KW OR LARGER
16234	03/96	DIESEL ENGINE-GENERATOR SETS – PRIME AND STANDBY – 10 TO 500 KW
16237	09/97	SINGLE OPERATION GENERATOR SETS
16261	06/97	VARIABLE FREQUENCY DRIVE SYSTEMS UNDER 600 VOLTS

16268	09/97	400-HERTZ (HZ) SOLID STATE FREQUENCY CONVERTER
16272	09/97	THREE-PHASE PAD-MOUNTED TRANSFORMERS
16273	09/97	SINGLE-PHASE PAD-MOUNTED TRANSFORMERS
16301	09/97	OVERHEAD TRANSMISSION AND DISTRIBUTION
16341	09/97	PAD-MOUNTED SF6 INSULATED INTERRUPTER SWITCHES
16360	09/97	SECONDARY UNIT SUBSTATIONS
16361	12/95	PRIMARY UNIT SUBSTATIONS
16402	09/97	INTERIOR DISTRIBUTION SYSTEM
16410	12/96	AUTOMATIC TRANSFER [AND BYPASS/ISOLATION] SWITCHES
16720	12/95	TELEPHONE DISTRIBUTION SYSTEM, INSIDE PLANT
16725	03/96	NURSE CALL SYSTEM
16782	12/95	[MASTER] [COMMUNITY] ANTENNA TELEVISION SYSTEM

DIVISION 13 SPECIAL CONSTRUCTION

N-13855	06/96	ADDRESSABLE INTERIOR FIRE DETECTION AND ALARM SYSTEM
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DIVISION 15 MECHANICAL

L-15700	03/98	HEATING, VENTILATING, AND COOLING SYSTEM
L-15741	12/96	WATER SOURCE HEAT PUMP SYSTEMS

OTHER REGIONAL AND LOCAL SPECIFICATIONS AS DETERMINED BY THE PREPARING ACTIVITIES

Y2K INSERT FOR SECTION 01110 SUMMARY OF WORK

1.4 YEAR 2000 (Y2K) COMPLIANCE

Provide computer controlled facility components, specified in the specification sections listed below, that are year 2000 compliant (Y2K). Computer controlled facility components refers to software driven technology and embedded microchip technology. This includes, but is not limited to, telecommunications switches, programmable thermostats, HVAC controllers, elevator controllers, utility monitoring and control systems, fire detection and suppression systems, alarms, security systems, traffic signals, and other facilities control systems utilizing microcomputer, minicomputer, or programmable logic controllers.

NOTE: Potentially affected specifications sections in this project include the following sections. Edit this list to suit the specific construction project.

[Section 02811	Irrigation Sprinkler Systems]
[Section 02821	Chain Link Fences and Gates]
[Section 08710	Door Hardware]
[Section 08745	Electrical Locking Control for Brigs]
[Section 11020	Security Vault Door [and by Day Gate]]
[Section 11194	Detention Hardware]
[Section 11320	Grit Collecting Equipment]
[Section 11331	Comminutor]
[Section 11338	Circular Clarifier]
[Section 11375	Aeration Equipment]
[Section 11400	Food Service Equipment]
[Section 11475	Radiographic Darkroom Equipment]
[Section 11601	Laboratory Equipment and Fumehoods]
[Section 11702	Medical Equipment, Miscellaneous]
[Section 11744	Dental Equipment]
[Section 13038	Cold-Storage Rooms (Prefabricated Panel Type)]
[Section 13205	Steel Tanks with Fixed Roofs]
[Section 13209	Water Storage Tanks]
[Section 13216	Underground Petroleum Tanks]
[Section 13702	Basic Intrusion Detection Systems (IDS)]
[Section 13703	Commercial Intrusion Detection Systems (IDS)]
[Section 13798	Duress Signal System [for Brig Facilities]]
[Section 13799	Watchtour System [for Brig Facilities]]
[Section 13851	Exterior Fire Alarm System, Closed Circuit Telegraphic Type]
[Section 13852	Interior Fire Detection and Alarm System]
[Section 13853	Fire Alarm System, Radio Type]

[Section 13920	Fire Pumps]
[Section 14210	Electric Traction Elevators]
[Section 14240	Hydraulic Elevators]
[Section 15183	Steam System and Terminal Units]
[Section 15193	Gasoline/Diesel Dispensing Systems]
[Section 15194	Aviation Fuel Distribution and Dispensing]
[Section 15195	Natural Gas and Liquid Petroleum Piping]
[Section 15213	Large Centrifugal Air Compressors (Over 200 HP)]
[Section 15214	Large Nonlubricated Reciprocating Air Compressors (Over 300 HP)]
[Section 15215	Nonlubricated Rotary Screw Air Compressor(100 HP and Larger)]
[Section 15501	Steam Heating Plant Watertube (Shop Assembled) Coal/Oil or Coal]
[Section 15502	Steam Heating Plant Watertube (Field Erected) Coal/Oil or Coal]
[Section 15511	Water-Tube Boilers]
[Section 15516	Steam Boilers and Equipment (500,000 – 18,000,000 BTU/HR)]
[Section 15517	Steam Boilers and Equipment (18,000,000 – 60,000,000 BTU/HR)]
[Section 15601	Central Refrigeration Equipment for Air Conditioning
[Section 15602	Refrigeration Equipment for Cold Storage]
[Section 15700	Heating, Ventilating, and Cooling System]
[Section 15730	Unitary Air Conditioning Equipment]
[Section 15741	Water Source Heat Pump Systems]
[Section 15901	Space Temperature Control Systems]
[Section 15910	Direct Digital Control Systems]
[Section 16230	Diesel-Electric Generators 500 TO 2,500 KW – Prime Duty]
[Section 16231	Diesel-Electric Generators 2,501 KW or Larger – Prime Duty]
[Section 16232	Standby Diesel-Electric Generators 301 to 1,000 KW]
[Section 16233	Standby Diesel-Electric Generators 1,001 KW or Larger]
[Section 16234	Diesel Engine-Generator Sets – Prime and Standby – 10 to 500 KW]
[Section 16237	Single Operation Generator Sets]
[Section 16261	Variable Frequency Drive Systems Under 600 Volts]
[Section 16268	400-Hertz (HZ) Solid State Frequency Converter]
[Section 16272	Three-Phase Pad-Mounted Transformers]
[Section 16273	Single-Phase Pad-Mounted Transformers]
[Section 16301	Overhead Transmission and Distribution]
[Section 16341	Pad-Mounted SF6 Insulated Interrupter Switches]
[Section 16360	Secondary Unit Substations]
[Section 16361	Primary Unit Substations]
[Section 16402	Interior Distribution System]
[Section 16410	Automatic Transfer [and Bypass/Isolation] Switches]
[Section 16720	Telephone Distribution System, Inside Plant]
[Section 16725	Nurse Call System]
[Section 16782	[Master] [Community] Antenna Television System]

1.4.1 Definition – Y2K Compliant

Computer controlled facility components that accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations.

1.4.2 Y2K Compliance Warranty

For each product, component and system specified as a “computer controlled facility component” in the specification sections listed above, provide a statement of Y2K compliance warranty for the specific equipment. The contractor warrants that each hardware, software, and firmware product delivered under this contract and listed below shall be able to accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations to the extent that other computer controlled component, used in combination with the computer controlled component being acquired, properly exchanges date/time data with it. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of the contractor’s standard commercial warranty or warranties contained in this contract, provided that notwithstanding any provision to the contrary in such commercial warranty or warranties, the remedies available to the Government under this warranty shall include repair or replacement of any listed product whose non-compliance is discovered and made known to the contractor in writing within one year (365 days) after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.